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## HEPATIC ABSCESES; FATAL PERITONITIS.

CASE OF THE LATE SECRETARY OF THE STATE BOARD OF HEALTH.

BY S. L. ABBOT, M. D.

In order to appreciate fully the significance of all the symptoms in the case of the late lamented Secretary of the State Board of Health, and the questions which arose during their development, it is necessary to go back to his army experience during the late war.

Having left home in the first year of the rebellion as surgeon of the 23d Regiment of Massachusetts Volunteers, Dr. Derby found himself early in 1862 on the coast of North Carolina, at New Berne. At this post and in the vicinity he passed two years, partly in active service in the field, partly as surgeon-in-chief of a large military hospital. As a precaution against the malarial influences by which he was surrounded, he took daily from two to five grains of sulphate of quinine, with the effect, as he believed, of averting all injury from the climate. It is certain that during that period he had no attack of any of the malarial affections so common about him. At the end of two years he was transferred to the scene of active operations in Virginia, under General Grant, and at this time was much exposed, in the responsible position of medical director of an army corps, to intense heat; and finally, after some months' service, was completely broken down and "demoralized," as he expressed it—in a state of complete bodily and mental prostration. This was accompanied by a more or less constant dull pain in the region of the diaphragm. In this condition he applied for a transfer to a more northern station, and received the appointment of surgeon-in-chief of the large military hospital at Augusta, Maine. During the year that he passed at this place the pain in the region of the diaphragm gradually subsided. During the whole period of his service he had no attack of strictly malarial disease.

For some years after the war Dr. Derby's health was excellent. The organization of the State Board of Health gave him an opportunity for the kind of work which he particularly enjoyed and which his army experience had specially qualified him for, and he gladly accepted the position of secretary, which he so honorably filled up to the time

of his death. The labors of the office were unceasing and most exhausting. As the executive officer of the board he was loaded with a very heavy responsibility, which taxed his bodily and mental energies to the utmost, often weighing him down with very grave anxieties and cares.

Between three and four years ago, Dr. Derby consulted me on account of a gastric difficulty which was giving him not a little solicitude. He told me that it first came on quite suddenly, without any previous warning. Having eaten a plain but hearty dinner, he was surprised after an interval of four hours by an attack of vomiting in which he ejected all the food he had taken, apparently unchanged, — "just as if it had been kept in a tin kettle," to use his own expressive words. There were some traces of blood, as he thought, in the vomitus, and the idea of a chronic ulcer of the stomach suggested itself to him. His stomach, having relieved itself, was easy until he next took food. Eating, however, was followed by vomiting again, but sooner than before, the food being unchanged. Finally the organ became so irritable that it rejected food almost as soon as it was taken. With this there was little or no pain. As the gastric irritability increased, there came on very frequent and abundant eructation of gas of the most peculiar odor, as well as copious ejection of a watery fluid, in much larger quantity than the liquids swallowed. There was none of the peculiar pain generally accompanying gastric ulcer, and there was no trace of blood to be seen under the microscope in a small specimen of brownish fluid thrown up and suspected to be blood ; neither could any sarcinae be detected in the matters vomited. There was slight yellowness of the conjunctivæ, and some tendency to constipation. Dr. Derby mentioned, as possibly having some connection with his symptoms, that it had been his habit for years to take a glass of whisky and water before going to bed. The symptoms appeared to indicate gastric catarrh with almost complete arrest of digestion, probably owing to or connected with some obstruction to the functions of the liver.

Of these attacks Dr. Derby had several before his last sickness, prostrating him very much at the time, causing him to lose much flesh, and followed by tardy convalescence. It usually took him at least four weeks to get back to what he considered a fair state of health. In the intervals, however, he considered himself in the main as quite well, although he was obliged to exercise some care in his diet ; sweets of all kinds being particularly obnoxious to him. He also gave up the habitual use of stimulants, as he found them not to agree with him.

For these attacks he was treated at first with small doses of blue pill or podophyllin and saline laxatives, hydrocyanic acid to some extent for the irritability of the stomach, and very low diet. At first almost entire abstinence from food was prescribed. After a short interval a

small quantity of milk could be retained without vomiting ; this was gradually increased, and other light articles of diet were added, until the stomach recovered its tone. These attacks, however, told upon his strength a good deal, and it was a matter of common remark among his friends that he was growing old in appearance very fast.

In May, 1873, after a severe and prostrating attack, as above described, Dr. Derby left home for an extensive tour in the West, partly to recruit his health and partly for the purpose of making a sanitary inspection of its great cities. On this journey he visited St. Louis, Cincinnati, St. Paul, Chicago, Cleveland, Buffalo, and other populous places, in each of them examining all the localities likely to be more or less prejudicial to public health. He returned home after several weeks, none the better, but rather the worse. His health subsequently improved, however, and during the month of February, 1874, he made a flying visit to Florida with an invalid relative, going as far as Green Cove Springs, but sleeping only one night in that State. After his return home he was in fair health until the latter part of May.

On the evening of May 21st I received a note from Dr. Derby, begging me to visit him and give him a subcutaneous injection of morphia. I found him suffering from a severe pain passing from one hypochondrium to the other, which had come on soon after eating a breakfast of somewhat indigestible character, had continued all day, and had become almost intolerable. There was no nausea or eructation. Pulse 40. Skin natural. I advised him to defer the use of an opiate, and to take a mercurial cathartic. He selected calomel as a remedy which usually acted kindly with him, and took six grains, which he had found to be a sufficient dose. Sinapisms were applied to the seat of pain. At night, if kept awake, he was advised to take chloral hydrate, fifteen grains, with bromide of potassium, a scruple, and to repeat the dose if necessary.

May 22d. Took in the night two doses of the chloral and bromide without satisfactory effect, and subsequently three doses of sulphate of morphia, one sixth of a grain each. He was now quite free from pain and tenderness at the seat of yesterday's pain. Nausea, headache, and general malaise, which he attributed to the morphia ; there had been no movement of the bowels.

The next day he was still suffering from headache, and he had had a poor night. He was much distressed by flatus, the lower part of the abdomen being much distended and tense ; no tenderness in any part of the abdomen. No dejection. The wind seemed to be in the small intestines, as there was no marked resonance over the colon. He was recommended to take an enema of six ounces of the compound infusion of senna, as the speediest way of moving the bowels.

From this he got no relief, although the enema was retained several

hours. He then took in divided doses a bottle of Pullna water. This operated four or five times during the following night, producing very copious, dark, liquid dejections, giving him entire relief from his abdominal discomfort. At one o'clock in the morning he was seized with a very severe chill, which lasted half an hour and was followed by fever of several hours' duration and subsequent very profuse sweating. At the time of my visit on the 24th he was much exhausted, the conjunctivæ were decidedly yellow, and there was a slight yellowness of the skin.

On the following night the chill and fever were repeated and were very severe. Ten grains of blue pill were prescribed, to be followed by a Rochelle powder in three hours.

On the evening of this day, May 25th, at Dr. Derby's request, Dr. Ware saw him with me in consultation. The most careful examination at this time failed to detect anything abnormal about the abdomen. There was no unusual hardness, fullness, or tenderness anywhere. Dr. Derby was strongly inclined to consider the attack malarial, an opinion not fully accepted by myself, and decidedly rejected by Dr. Ware. It was determined to follow an expectant course of treatment, with low diet.

May 26th. Free evacuations during the night. Pulse 50. Another chill at the same hour of the morning, and equally severe. Dr. Derby reported his temperature during the fever at 105°. At noon, pulse 87; temperature 100.8°. At this time, at his very earnest request, I decided to give him moderate doses of sulphate of quinine at short intervals, and he accordingly took, in divided doses, sixteen grains before seven P. M.

May 27th. Tinnitus aurium came on before midnight. Has slept a little. Headache, which he has had since the second day of his illness, continues, with occasional lancinating pangs from the left to the right temple. Chill at the usual hour. Has had several slight dejections, liquid, of a bright yellow color. Urine highly colored by bile. An eruption of herpes in single papules and occasional patches on the sides of the neck, temples, and wrists, an affection to which Dr. Derby has been more or less subject all his life. If the tinnitus should continue, the dose of quinine to be restricted to two grains, taken at nightfall.

May 28th. Chill as usual. General condition the same. Tongue furry, white, thickened, deeply fissured, pasty. Tinnitus continues. To take but one grain of quinine at night.

May 29th. About the same. Chill in the night. In the evening, after consultation with Dr. F. E. Oliver, it was decided to administer six grains of sulphate of quinine, notwithstanding the tinnitus, which continued, but was mild, and had been so from the first. The pulse for several days had been between 50 and 60, and the temperature was about normal. Very little food was taken, mostly milk.

From one A. M. of the 29th until one P. M. of the 31st, an interval of sixty hours, there was no chill. At the hour last mentioned, there was

a recurrence of great severity, and followed by extreme depression. Very little food had been taken. By this time the herpes had become a serious annoyance. There were at least a dozen large pustules on the left upper eyelid, completely closing the eye, and several on the lids of the right eye. The patches elsewhere were very large, and those on the arms were supported by a livid base almost as dark as purpura. There was a chain of patches and scattered pustules on the back from the nape to the sacrum, on each side of the vertebral column. The most annoyance was experienced from the eruption on the eyelids, which was accompanied by severe conjunctivitis, while that upon the back made decubitus very uncomfortable.

From the 1st to the 15th of June, inclusive, the chills continued with great regularity, on some occasions occurring twice in twenty-four hours, so that during this period there were twenty of them. They occurred mostly at night, and caused great suffering from the want of sleep. By the 15th, the headache, which had been very severe during the chills, and more or less during the intervals, had disappeared, and the fever following the chill was much shorter. During this period the pulse ranged from 52 to 105, the latter only on one occasion, the average being about 68. The temperature ranged from 98° to 104.5°, the latter only on two occasions, during the period of fever following a chill; the average was 100.9°. The quinine treatment was vigorously pursued, the doses being increased until on June 4th forty grains were taken during twenty-four hours.

June 5th. Consultation with Dr. Samuel Cabot, who failed, on the most careful examination of the abdomen, to detect anything abnormal except a slight increase of hepatic dullness. As very decided cinchonism existed, it was determined to give up the use of quinine, and to administer Fowler's solution instead. The use of this remedy was continued in gradually increasing doses until June 10th,—fifty drops having been taken during the previous twenty-four hours without the slightest inconvenience to the patient. At this time there was no tenderness on pressure over the liver or spleen, but the latter could be distinctly felt to be somewhat enlarged. Iodide of potassium was substituted for the arsenic, and given in moderate doses for two days.

June 12th. On consultation with Dr. Cabot, it was decided to give sulphate of quinine, six grains, Dr. Lente's solution, subcutaneously. This was administered at four p. m., and was followed at six by a chill which lasted three hours, and a proportionately long fever and sweating turn. Another chill of equal severity occurred at six o'clock of the following morning.

June 13th. For the first time a slight tenderness was complained of over a very small surface at the edge of the ribs, above the right hypochondrium. Percussion gave resonance at this point, and there was

much flatus in the colon. The tenderness was much less after a free evacuation of the bowels.

During the chills much relief was experienced on several occasions by a prolonged warm bath. On one occasion this was continued for an hour at a temperature of 105°. Cold wet cloths were freely applied to the surface during the fever turns.

A fair amount of nourishment was taken, and stimulants were given as occasion required. The extreme severity of the paroxysms was somewhat mitigated, and the patient sat up from time to time; on one occasion, half a day. The bowels were moved without medicine, the dejections being semi-solid, and generally of a bright yellow color.

June 16th. I was called to Dr. Derby at two A. M., and found him in great suffering. His exclamation on my entering the room was, "Doctor, it's peritonitis; it's all over with me, and I want you to put me out of my misery." A severe chill had come on at ten P. M., which lasted two hours, and was followed by two hours of fever. During the chill he was seized with a sharp "catching pain" at the epigastrium; this spread rapidly over the whole abdomen, which was now quite full and tender. An enema had been given with some relief, and the abdominal surface had been irritated by the application of turpentine. The pulse was 90; the respirations 30. The patient had lain flat on his back, with limbs extended, for two hours, unable to move on account of the pain. With very great difficulty he was assisted to change his position slightly. Half an ounce of rum was given him, and repeated doses of sulphate of morphia (one sixth of a grain), ether being inhaled at once to alleviate the pain until the morphia produced some effect. At six A. M., the fourth of a grain of sulphate of morphia was given subcutaneously; it had not been considered expedient before, as there was some doubt of his ability to bear it in his exhausted condition without narcotism. He soon fell asleep, and awoke at seven A. M. free from pain, so that he could easily be moved from his constrained position. At this time the pulse was 88, the respiration 26. At half past eight P. M., the report was that he had slept most of the day. He had had at short intervals regurgitation of pale, greenish mucus and watery fluid, about a pint in all, with a sort of hiccough. He had taken only half an ounce of beef essence. Pulse 96, of good strength. Temperature 99°. No pain when at rest. No chill to-day. No marked physical sign at base of right lung. Tender on *firm* pressure at base of right chest beneath axilla; less so at right hypochondrium, with resonant percussion at this point. Bears firm pressure over the whole abdomen with very little inconvenience.

From the 17th to the 20th the symptoms of peritonitis continued, but not in the most violent form. The pulse ranged from 84 to 105, the latter observed only once, during the last hours of life. Temperature

98°, 101.8°, 97.5°, 98.5°, as noted on the 17th and 18th. The hiccup and vomiting continued, with an intermission of several hours occasionally, so that a certain amount of liquid nourishment and stimulants was retained. The abdomen was moderately full and tender, but not so much so as to prevent change of position without much suffering. There was moderate fever at night, but no chill. Each day Dr. Derby was able to get out of bed, and on one occasion sat up half an hour. Considerable relief was obtained from anodyne embrocations to the abdomen.

June 19th, 8 p. m. Extremities cold. Pulse 105, weak. Patient suffering much from dyspnœa. Champagne and beef essence with rum were given by the mouth and enemata, with a moderate amount of morphia. Great restlessness and dyspnœa continued until a short time before death, at forty minutes past midnight, consciousness being retained to the last.

*Autopsy*, by Dr. Calvin Ellis, thirty-three hours after death.

On opening the thorax the costal cartilages were found to be firmly ossified throughout. There was a limited old adhesion at the summit of the right lung, with some emphysematous rounding of the edges of the upper lobe. The surface of the lungs was spotted with small ecchymoses. No other morbid change was seen in the lungs. The trachea was firmly ossified. The heart was flaccid, and filled with liquid or loosely coagulated blood.

From two to three pints of offensive pus were found in the abdominal cavity. The peritoneum was more or less reddened, but the intestines were not adherent to each other, nor was there any recent lymph upon them. A layer of recent fibrin appeared on the upper surface of the liver. Old, firm adhesions united the right edge of the omentum to the parietes at the upper part; there was also an adhesion of the ascending colon, just below the arch, to the abdominal walls. Old, firm adhesions of the tissues about the gall-bladder completely concealed this organ. Pressure in this region caused the escape of pus from numerous small openings near the edge of the liver. An incision showed a cavity as large as an English walnut between the seat of the gall-bladder and the pyloric portion of the stomach, to which it was closely adherent. The ductus communis choledochus and the hepatic duct were continuous to the liver, and were stained with bile. The cystic duct could be traced but a short distance, and ended in dense, blackened tissue, which was a part of the lining of the cavity above mentioned. No gall-bladder was found, but some blackened, irregular shreds attached to the liver seemed to represent it. Just above the cavity first discovered, in the substance of the liver, was another, of about the same size, the inner surface of which was soft, flocculent, and of a dark-brown color. In the neighborhood were several other small abscesses, from half an inch to

an inch in diameter, containing a thick brownish fluid. The hepatic tissue about them did not differ from that of the rest of the liver, which was somewhat reddened, the whole organ being increased in size about one half, but not otherwise remarkable.

In the neighborhood of the seat of the gall-bladder, traces of inflammation were found in several branches of the hepatic vein, with several small coagula, some of which were quite broken down.

The mucous surface of the stomach was dotted over pretty thickly, towards the pyloric orifice, with small, pinkish spots of congestion, but was otherwise healthy.

The spleen was considerably enlarged and quite soft.

No critical examination of the other organs was made, but a cursory examination showed nothing apparently morbid.

**Remarks.** The history above related shows that, at the outset, the diagnosis of the case was extremely obscure. The symptoms seemed to spring from the same cause which had occasioned the attacks to which Dr. Derby had been subject for several years. After the occurrence of the first severe chills, followed by fever and profuse sweats, the probability of a malarial element in the case presented itself with great force. Dr. Derby himself was strongly inclined to regard his symptoms as due to such a cause. The question arose whether it was possible that the quinine prophylaxis which he had practiced during the war could by any possibility have merely held a malarial attack in abeyance, which now had come on with full power, the protective influence of the antiperiodic having become exhausted. Was it possible, too, that the attack was due to any recent exposure ? And in this connection his visit to Florida and his Western tour seemed to have special significance. Repeated examinations failed to detect any local disease in progress which could account for the great constitutional disturbance, unless the slight jaundice be excepted. The severe eruption of herpes on the eighth day was a serious complication, and added greatly to the sufferings of the patient. The obscurity of the case began to disappear with the occurrence of pain in the region of the liver on the twenty-fifth day, but even at this time the symptom was not at all urgent and was very limited in extent.

The pulse was noticeably slow throughout.

The whole course of the sickness was one of great suffering to the patient. The chills produced the greatest distress, from the dyspnœa which they occasioned. The rigid chest, from ossification of the cartilages, gave little chance for expansion in respiration, and the diaphragm and abdominal muscles were much impeded in their action by the contraction of the rigors. Early in the attack Dr. Derby said he felt he must die during a chill, so terrible was the embarrassment of his breathing. These attacks came on mostly at night, so that he suffered much

for want of sleep ; they were also very frequent, on several occasions occurring three times in thirty-six hours. It will have been noticed that they ceased at once when the symptoms of peritonitis appeared. It would seem that the old disease of the gall-bladder was the starting-point of the phlebitis which led to the formation of the hepatic abscesses.

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### MAMMILLITIS.<sup>1</sup>

BY S. F. BACHELDER, M. D.

THERE is one form of mammillitis which does not seem to be benefited by any of the usual applications. I allude to the condition where there is a fissure or crack at the base of the nipple, nearly separating it from the breast. Inflammation is likely to set in after a few days, and the tendency is to go on from bad to worse indefinitely. Byford says,<sup>2</sup> "To such an extent are the fissures of the base carried by ulceration, sometimes, as completely to amputate this little projection." But there is generally at first little or no inflammation, and a careless observer would frequently fail to discover any trouble ; and when found it appears like a clean cut with a sharp knife partly around the base of the nipple. As long as it can be kept quiet it is comparatively painless ; but every effort of the child to nurse draws the edges apart, breaking up any adhesions that may have formed, and causing agonizing pain to the mother. These are the cases where none of the plans recommended in the books ever seemed to do any good in my hands.

It occurred to me that as it was impossible to keep the edges of the fissure in apposition so as to heal, while the child nursed, they might be kept separated all the time, so that the ulceration might fill up from the bottom by granulations. Acting upon the thought, in a case of this kind, I took a strip of adhesive plaster two inches long by one quarter of an inch in width, attached one end to the nipple near the apex, and then by traction upon it drew the nipple away from the fissure so as to open the latter as much as possible. The other end of the plaster was then attached to the breast so as to hold the nipple in this oblique position, thus keeping the fissure permanently open. The part was then dressed with a solution of nitrate of lead in glycerine, ten grains to the ounce, and instructions were given to remove the plaster when the babe was to be nursed, but to apply another in the same way immediately afterwards. There was no more complaint, and in two days the woman, in answer to my inquiries, said it was well.

<sup>1</sup> From a Communication read before the South Boston Medical Club, December 10, 1874.

<sup>2</sup> Byford on Diseases of Women.

To prevent, not only these cases, but mammillitis and mastitis generally, I would recommend the following plan to be practiced during the last months of gestation: Avoid all liniments, ointments, or washes, except water; remove all pressure of the clothing, so as to allow the nipples and breasts to take the size and form that nature chooses, and expose them as much as possible to the action of light and air; manipulate the nipples several times daily with the fingers, imitating the action of a child's mouth while nursing, but gently, so as to avoid any irritation. The combined effect of the freedom, light, air and friction, will make them tougher and less liable to abrasions, cracks, or excoriations.

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## RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY R. H. FITZ, M. D.

### PATHOLOGY.

*Recognition of Bacteria.* — After referring to the difficulties in the way of determining by optical and chemical means the nature of the globular forms of bacteria, Hiller<sup>1</sup> refers to his own experiments, and concludes that his methods are such as may permit bacteria to be recognized and to be distinguished from bodies of a similar appearance. To make these methods available they must be properly employed, and with a sufficient botanical knowledge of the life and growth of the vegetation. These means are optical and chemical, supplemented by culture.

By optical means are determined the characteristic forms of growths — as rods and threads — and the characteristic movements of monads and rods in very fluid media. The manner of their growth and multiplication is also thus ascertained, the rule being that free monads and rods can only develop into free individuals of the same sort under appearances of motion, and that a growth of motionless bacteria is always a continuous one, necessarily leading to the formation of threads or masses. The granular masses may be seen to be firm, continuous, membraniform, or loose, movable, forming an emulsion.

The chemical means serve to distinguish granular detritus imbedded in albuminous material, such as results from the death of cells, from membraniform masses of vegetation, since the former is dissolved, liquefied by caustic potash, and is coagulated by alcohol, whereas the latter are unaffected by these reagents. Further, if tissues are macerated for an hour in a ten per cent. solution of caustic potash, monads con-

<sup>1</sup> *Virchow's Archiv*, vol. lxii., 1875.

tained in them will be stained yellow by iodine; fat granules are not colored.

Finally, by culture the vitality of the organisms may be determined. The usual precautions are insisted upon, and bent capillary tubes are recommended for the examination of the blood, the upper end being closed with cotton, the lower end sealed.

*Bacteria in Endocarditis and Acute Rheumatism.*—Previous to 1870 but little general interest was manifested in certain forms of endocarditis, which had been more frequently observed in puerperal conditions, though Virchow had repeatedly called attention to the matter, had published several cases, and had spoken of the form as an acute, ulcerating (diphtheritic) endocarditis.<sup>1</sup>

Meyer<sup>2</sup> published a brochure in 1870 on ulcerated endocarditis, wherein he spoke of its great clinical importance, and of the various conditions with which it was associated, as emboli, metastatic abscesses, haemorrhages, parenchymatous alterations, etc. The disease was spoken of as a grave one, and was regarded in the same light as pyæmia. The ulceration of the valves of the heart was considered to be due to an exciting cause, as articular rheumatism, febrile processes of a general character, puerperal diseases, typhus, exanthemata, etc., which acted upon an already diseased endocardium, as the remains of an antecedent valvular endocarditis were usually present.

The emboli producing the secondary changes were regarded as elements floated away from the endocardium, which were chemically injurious, and similar to pus, or of a purulent character.

Virchow<sup>3</sup> referred to this subject at considerable length in a communication to the Berlin Obstetrical Society, stating that usually such decided alterations of the uterus and its appendages were present that the endocarditis might be regarded rather as a complication. There were also cases where the endocarditis was the main disturbance, the uterus being relatively unaltered. It was peculiar to the process that the changes in the valves, which at the outset resembled those of simple endocarditis, terminated in softening and rupture. Multiple embolism was thus likely to occur, the results of which were minute nodules resembling abscesses. Such forms may be exceedingly malignant in character, therein seeming to be influenced by the accompanying puerperal affection, as diphtheritis, phlegmonous inflammation of the broad ligament, etc. The condition of the valves resembled a diphtheritic mass, composed of granular particles, and it was considered probable that the changes occurring in the diseased valve were allied to the diphtheritic process. It was also admitted that minute organisms of the

<sup>1</sup> Gesammelte Abhandlungen, 1856, page 721.

<sup>2</sup> Ueber die Endocarditis ulcerosa, 1870. Jahresbericht von Virchow und Hirsch für 1871, ii. 92.

<sup>3</sup> Ueber die Chlorose und Endocarditis puerperalis. 1872.

same apparent character were present in the circulating blood during life, which might "take root" in the endocardial surface, and multiply. In some instances Virchow found similar granular masses in the metastatic nodules; he had seen them also in the vessels of the choroid, in the spleen and kidneys, not only in but also outside the vessels. He had also found them in the kidneys from cases of putrid cystitis, and his view of their parasitic nature was corroborated by the observations of Von Recklinghausen.<sup>1</sup> This pathologist ascertained that miliary accumulations of micrococci were the cause of the small abscesses found in a large number of infectious diseases, particularly in pyæmia and puerperal fever; also in typhus, acute articular rheumatism, urinary infiltration, and pulmonary gangrene. They were found most frequently in the kidneys, usually surrounded by a zone of tissue, haemorrhagic or infiltrated with pus, though there might be no surrounding reactive appearances where the condition was a recent one. In many instances there was no endocarditis. On one occasion where slight depositions were found upon the mitral valve, he considered it more probable that such were metastatic in the same sense as their presence in other organs.

Long before this, Beckmann<sup>2</sup> spoke of the occurrence of a finely granular mass in the renal tubules, Malpighian bodies and capsules of those persons who had died of pyæmia. He stated further that the individual granules bore a close resemblance to vibrios, and at times were found to present vibratory movements.

Heiberg<sup>3</sup> reported a case of puerperal ulcerative endocarditis, where granular masses were present in the heart, and which he considered of a parasitic nature. He gave also a *résumé* of a case of Winge's, communicated to the Swedish Medical Society in 1869, in which not only were the masses present in the heart, but they were also found in the embolic nodules. In both these cases the granules were regarded as fungous growths, and it was supposed that their germs had entered from without.

It was further suggested that every ulcerative endocarditis might be "pyæmic (or puerperal), an infectious disease due to the entrance of noxious substances (fungi?) from without, a view corresponding tolerably with Virchow's opinion that the ulceration was of a diphtheritic character."

Under the title A Case of Capillary Embolism, Beckmann<sup>4</sup> reported one whose clinical course suggested that of typhus with petechiae, but the anatomical appearances were those of ulcerative endocarditis and multiple embolism. The diseased valve bore finely granular masses

<sup>1</sup> Centralblatt für die medicinischen Wissenschaften, 1871, page 713.

<sup>2</sup> Virchow's Archiv, 1856, ix. 221.

<sup>3</sup> Virchow's Archiv, 1872, lvi. 407.

<sup>4</sup> Virchow's Archiv, 1857, xii. 59.

not readily acted upon by reagents. Minute spots in the substance of the heart contained capillaries in which was a similar granular mass. Like conditions were found in the kidneys and in the vessels of the pia mater.

An article on diphtheritic endocarditis, by Eberth,<sup>1</sup> now appeared. A special form of disease of the valves of the heart in pyæmia had suggested itself to him as due to minute organisms. It appeared like the acute rheumatic forms, but masses of spherical bacteria were found upon the surfaces of the valves. He attributed to these the property of producing secondary suppuration independently of the transfer of coarser particles.

His case is recorded as one of malignant ulcerative endocarditis, pursuing an independent course, with the symptoms and characteristic alterations of pyæmia, but quite free from the presence of a diphtheritic wound. Granules regarded as globular bacteria were found in the heart in punctate haemorrhages and abscesses, and as emboli in the Malpighian corpuscles. A local source for their admission into the blood could not be ascertained.

In the same year Lanceraux<sup>2</sup> suggested the view that a paludal poison gave rise to the ulcerative, vegetative form of endocarditis, the clinical features of which resembled those of septicæmia.

Eberth<sup>3</sup> then reported a second case which proved rapidly fatal, with ulceration and diphtheritic patches upon the mitral valve, and miliary abscesses in the heart and kidneys, the vessels in which contained punctate bacteria. Colonies of bacteria were found also in the swollen mesenteric glands. There was no wound through which the spores could have entered from without.

The cornea of rabbits were inoculated with the contents of the cardiac and renal abscesses; profuse suppuration and perforation followed, and a decided growth of bacteria was found here.

A case of primary diphtheritic endocarditis was next published by Maier.<sup>4</sup> The aortic and pulmonary valves were thickened, the former ulcerated and perforated. From the perforated spot a canal extended through the base of the auricular septum into the left auricle, where was a ragged opening. A large abscess was found beneath the capsule of the right kidney, communicating with the renal pelvis; elsewhere in this organ were small red and yellow spots. A finely granular mass like that found in diphtheritic mucous membranes was observed on the edges of the perforation of the aorta, and was considered to be composed of globular forms of bacteria. Similar granules were scraped

<sup>1</sup> Virchow's Archiv, 1873 lvii 228

<sup>2</sup> Boston Medical and Surgical Journal, October 16, 1873. Second Report on Pathology.

<sup>3</sup> Untersuchungen aus dem pathologischen Institut zu Zurich, 1873. Jahresbericht von Virchow und Hirsch, 1873, i. 213.

<sup>4</sup> Virchow's Archiv, 1874, lxii. 145.

from the wall of the abscess in the kidney, and others were found between the tubes, in the Malpighian capsules; also in the minute yellow spots. The case was regarded as identical with Eberth's, though its course was less rapid. The onset of the disease, with chills, high temperature, headache, diarrhoea, stitch in the side (splenic enlargement), was very characteristic. It progressed with high temperature, congestion of various organs and a tendency to haemorrhages in them, diarrhoea, and marked nervous symptoms indicative of a septicæmia. The nervous symptoms were twitchings of the face, tetanus of the cervical muscles, violent headaches; and later, babbling, tremors, involuntary evacuations, and sopor.

The symptoms and post-mortem appearances indicated a complication of septicæmia and embolism, the main affection being an endocarditis (probably primary) and a nephritis. Here, too, there was no sufficient evidence of the manner by which the spores entered the system.

The septic nature of some forms of acute articular rheumatism is very strongly suggested by the case reported by Fleischhauer.<sup>1</sup> He alludes to the occurrence of acute inflammation of the joints in puerperal fever, scarlatina, diphtheritis, typhus, dysentery, erysipelas, ulcerative endocarditis, and pyæmia. It is then suggested that a like or similar cause may be active in all, a view favored by the discovery of spores in almost all the above-mentioned diseases.

The clinical course was that of rheumatism, lasting four weeks, during the last two of which the symptoms were of so acute a character as to compel the patient to take to her bed. Miliary abscesses were found in both lungs, kidneys, heart, and in various muscles; there was also a suppurative parotitis and synovitis of various joints.

The renal abscesses contained granules whose optical and chemical relations were those of micrococci. These were present in the tubules mainly; between them and the more normal parts of the kidney was a zone of pus corpuscles. The organisms, at times, extended into the surrounding tissue, apparently having escaped from the tubes. The muscular abscesses, the largest of which were in close relation to the inflamed joints, consisted of agglomerations of globular bacteria surrounded by a layer of pus corpuscles. The same was true of the abscesses in the heart. Those in the lungs often presented as centres two or more alveoli filled with micrococci, surrounding which was pus, and still farther out the alveoli were filled with blood. In larger abscesses the bacteria were present in capillaries and veins. In the vessels and ducts of the inflamed parotid gland, colonies of micrococci were found. The examination of the joints gave negative results so far as these bodies were concerned. The manner of their invasion was obscure. It was considered that this case might be placed in the category

<sup>1</sup> *Virchow's Archiv*, 1875, lxii. 386.

of those of diphtheritic endocarditis previously referred to, notwithstanding the absence of that affection here.

*Typhoid Fever.* — In blood taken from the finger of a typhoid patient in the second week of the disease, Eichhorst<sup>1</sup> found fine granular, colorless cells, which were observed for five days. These were from four to six times larger in diameter than the white blood corpuscles, and contained from two to seven yellow disks entirely resembling red blood corpuscles, though somewhat paler.

They could be freed from the larger cells by pressure and the addition of water. Some of the cells presented projections like those of contractile cells. Otherwise the blood was not abnormal; even the small glistening granules, generally so abundant in febrile blood, were but scanty.

Klein<sup>2</sup> states that he found, in sections from hardened specimens, appearances in the mucous membrane upon and near Peyer's patches which show that an absorption of peculiar organisms occurs, and that they are transmitted along the lymph and blood vessels of the mucous membrane. In a case examined seven days after the headache, peculiar round, yellowish-brown bodies were found in the crypts of Lieberkühn. They varied in size from one fourth to three times that of a human red corpuscle, and were generally grouped in masses, then appearing of an olive-green color; on the edges of these groups, appearances of subdivision were indicated by kidney and biscuit shaped bodies. Similar bodies were present within the mucous membrane, apparently contained in lymphoid cells. These micrococci were in a genetic relation to a mycelium of a greenish-yellow color.

Masses of greenish-yellow micrococci were found penetrating the surface of the mucous membrane from without, also extending from the crypts of Lieberkühn into the surrounding lymph-passages.

(To be concluded.)

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#### PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

W. L. RICHARDSON, M. D., SECRETARY.

*Congenital Malformation of the Oesophagus.* — DR. TUCK reported the case. A male baby was born at the Boston Lying-In Hospital February 20, 1875. The labor was normal. The throat seemed filled with mucus at the time of birth, and about an hour later the baby was noticed to turn black in the face and to almost stop breathing. Some of the mucus was removed by tickling the throat. Wine of ipecac, in doses of ten drops, was given several times, but without any effect. At length the breathing seemed easier, and continued

<sup>1</sup> Deutsches Archiv für klinische Medicin, 1874, xiv. 223.

<sup>2</sup> Centralblatt, für die medicinischen Wissenschaften, 1874, xliv. 692.

so during the night. The baby was laid down with its arm bent under the body. It was soon noticed that the arm turned almost black, although it speedily regained its normal color on change of position. During the whole of the next day the child raised mucus in large bubbles. During the two following days he vomited all nourishment that was given. An examination of the chest showed nothing, the sounds being obscured by the rattling of mucus. The sixth day the baby began to vomit bloody matter, and the next day he came near dying in the morning from asphyxia, but was relieved by a warm bath. For a short time he seemed better, but refused to nurse, and appeared very feeble. The vomitus appeared to be almost pure blood, which came through both the mouth and the nostrils. At ten o'clock, having passed only a slight amount of meconium, the child received an injection with little or no result. He failed rapidly, and died on the seventh day.

DR. FITZ gave the following account of the autopsy, and showed the specimens.

The pharynx and upper part of the œsophagus terminated in a blind pouch, about an inch above the bifurcation of the trachea. Immediately below, the œsophagus entered the posterior wall of the trachea by a small opening, apparently surrounded by a sphincter muscle. There was no evident connection between the two portions of the œsophagus. The ductus arteriosus was remarkably large, nearly of the size of the thoracic aorta. The arch of the aorta was unusually small; in consequence of which the appearance of the specimen suggested the direct origin of the descending aorta from the right side of the heart. The spleen was quite small; the kidneys anaemic. The lower portions of both lungs were distended, dark red, non-crepitant, evidently filled with blood, and presenting the appearance of hemorrhagic infarction.

*Comparative Expense of English and American Cannel Coal.*—DR. N. FOLSOM reported the following experiment, which had lately been tried at the Massachusetts General Hospital. Two rooms of the same size, and similarly situated, were selected for the experiment. The temperature in each was kept as nearly uniform as was possible for twenty-four hours. The thermometer outside the building varied from 15° F. to —3° F., while the temperature of the two rooms averaged 65.1° F..

The result of the experiment was as follows. The American coal does not have the lustre of the English, being much duller in appearance. It comes in larger lumps, and burns with decidedly less flame, leaving behind a very large amount of ashes. On first igniting, it snaps badly. If left to itself for a considerable time it coats itself with fine white ashes. The English coal, on the other hand, gives out a more agreeable heat, and burns with a bright and far more attractive flame. It does not snap, and can be kept a long time without requiring any attention. The American coal used in the experiment cost fourteen dollars a ton, while the English cost twenty-four dollars. The weight of coal burned was as follows: of American coal, seventy pounds, at a cost of forty-nine cents; of English coal, thirty-five pounds, at a cost of forty-two cents. In other words, the expense of the English coal was one seventh cheaper than the American, without taking into account the extra amount of labor required to carry the additional quantity of American coal.

*Tobacco Poisoning.*—DR. WEBBER reported that he had seen several marked cases of chronic poisoning from the use of tobacco. They were characterized by a pain, more or less severe, which began in the lower part of the chest, just below the left nipple, and, later in the course of the disease, extended higher up on the thorax and also down the left arm. The pain was usually described as of a sharp, shooting character. The patients also complained of a peculiar soreness of the muscles of the arm. Nearly all the patients feared heart-disease.

DR. J. J. PUTNAM said that he had under his care a patient who awoke every morning with a feeling of intense depression in the cardiac region, accompanied by more or less tremulousness of the hands. These symptoms would last until noon, when they would entirely disappear. He thought that they were due entirely to the excessive use of tobacco.

DR. KNIGHT said that it was undoubtedly a fact that patients who are troubled with these symptoms very frequently entirely recover on leaving off the use of tobacco, without any medical treatment.

*Cancer of the Uterus; Pregnancy.*—DR. CHADWICK reported the case. Mrs. J. W., aged thirty-four, had eight children and one miscarriage in eight years. With her second husband she had four miscarriages in four years. Her mother died of cancer of the breast. The patient always enjoyed good health until September, 1872, when she was kicked in the abdomen by her husband. She flowed profusely at the time, and subsequently never menstruated regularly. In August, 1873, she began to have abdominal pains, accompanied by a constant serous and bloody discharge from the vagina.

In the autumn of 1873 the cervix uteri was found to be enlarged and nodular, but the vagina was not in any way implicated. Dr. Chadwick advised amputation, but it was not allowed. The haemorrhage was temporarily arrested by the use of chromic acid. The following February, owing to severe pain and haemorrhage, the operation was performed with a view to alleviate those symptoms.

Entire relief from pain and a complete arrest of the bloody discharges followed for three months, during which time the remains of the disease continued to grow, but unaccompanied by any ulcerations. The patient gradually recovered her strength. The following May the ulcerations began again to appear, accompanied with profuse haemorrhage and constant, foul, watery discharges. Early in June all these symptoms suddenly ceased; some pain only was complained of. This gradually increased, and, at last becoming paroxysmal, resulted in the birth of a three months' foetus in August. Immediately afterwards the haemorrhage and the serous discharges recommenced, and she died about the end of the following January.

In connection with this case DR. CHEEVER reported the following:—

On making an examination of a lady about to be confined at full term, a hard, nodular, cancerous mass was discovered on one side of the cervix uteri. This was the first that was known of the existence of any such disease in the patient. The labor progressed favorably, and was not in any way impeded by the presence of the foreign growth. As soon as the lochia ceased, the cancerous mass was removed. The patient made a good recovery, and did well for a number of months, when the disease returned, with a fatal termination.

*Case of Supposed Injury to the Arm.* — DR. BOARDMAN reported the case, as follows: Mr. J. presented himself in August, 1874, with the view of receiving treatment for some injury to his right fore-arm or elbow-joint. He stated that on the previous day he stepped from the rear platform of a horse-car, in order to permit the entrance of another passenger, and retained his hold by the right hand upon the handle of the dasher, facing in the direction of the horses. As the car was set in motion again, his feet slipped from under him, and, finding himself unable to regain his foothold, he let himself loose from the car, and, he thinks, fell upon his right hand. Whether his supposed injury was the result of traction upon the right arm or of the fall upon the right hand, he was unable to say. When seen by Dr. Boardman, the patient's condition, according to his statement, was the same as immediately after the accident. The right arm hung by the side, completely pronated. The patient was able to flex the fore-arm and to supinate the hand to a very slight degree only. There was no swelling of any joints, no pain or redness. Manipulation failed to produce any pain, except that forcible supination occasioned a tolerably sharp pain at a point on the shaft about two or three inches from the wheel of the radius. Deep and firm pressure with the finger-tips at this locality would occasion a similar pain. Careful examination detected nothing abnormal except the inability to bring muscular action into play and the fact that supination could be effected only to the degree in which the thumb would point nearly upwards, when the act would seem to be arrested abruptly by something in the region of the head of the radius. The wrist-joint obviously was intact. At the elbow-joint, no crepitus could be detected; the patient's arm was not fleshy, and careful examination, with and without manipulation, and comparison with the left arm, failed to discover any fracture or dislocation. The wheel of the radius could be seen, as well as felt, to revolve in its proper locality. Both the bones, the radius and ulna, could be distinctly traced, and nothing like a callous growth or exostosis, which might interfere with the rotation of the radius, could be found. The patient stated that he had never had rheumatism, and, to his knowledge, had never before met with any injury to this arm. In his occupation as a cook he had never had any trouble with this arm or hand; he was accustomed to carry heavy weights, was right-handed, and was never conscious of any difference in the appearance of the two arms. Believing the case to be a congenital deformity or the result of some injury during the youth of the patient, of which he had no knowledge, yet questioning the probability of the existence of this condition, when supination was impossible, without the knowledge of the individual, Dr. Boardman felt unwilling to assume the entire responsibility of the case, and so requested Dr. Gay to see the patient with him. Dr. Gay examined the arm with great care, and, without knowing Dr. Boardman's opinion, finally stated that he was unable to find any fracture or dislocation, but would decline to make a diagnosis without administering ether. The patient was thoroughly etherized, and another examination was made. While anaesthesia was being produced, the patient struggled violently with every portion of the body except the right arm which remained at rest by his side. Nothing further was found after this final examination, and Dr. Gay agreed that there was no recent fracture or

dislocation, and that the deformity probably existed prior to the accident. Friction with a simple liniment was ordered. One week later, the patient was seen again. In the interval, no new symptoms had developed. The muscular activity was returning, so that he could then flex the arm and rotate the hand himself; but the rotation was still limited to a small arc, just as it was after the accident, and when tried by himself was arrested abruptly, as before. The patient was intending to resume his ordinary occupation in a few days, and has not been heard from since that time.

*A Case of Peri-Uterine Inflammation.* — DR. SINCLAIR reported the case. Mrs. —, aged thirty-six, has been married seven years, but has never been pregnant. Has been generally healthy. Shortly after marriage she suffered from pelvic inflammation, which confined her to her bed for nearly three months. Since that time her health was good until the end of June last, when she experienced unusual fatigue after exertion. Immediately after a catamenial period, which ceased July 18th, she felt chilly and complained of hypogastric pains, headache and backache, nausea, vomiting, and dysuria, which steadily increased. Uterine haemorrhage came on a week later and continued more or less freely throughout her illness. She was first seen by Dr. Sinclair August 8th. She lay on her back, the lower extremities being retracted, the abdomen exquisitely tender on pressure. There was also anorexia and constipation. The nausea, vomiting, headache, and dysuria continued. The pulse was 108; skin hot, tongue foul; there was also great wakefulness. A paroxysmal pain was complained of in the right iliac region.

On examination of the pelvic organs the vagina was found to be hot and tender; uterus nearly fixed; some fullness in the right and posterior culs-de-sac, displacing the uterus forward and to the left. Touch gave intense pain. Eight leeches were applied to the haemorrhoidal veins, after which the bites were fomented. Suppositories of morphia and belladonna were directed to be placed in the rectum, *pro re natâ*; flax-seed poultices were applied to the hypogastrium; hot vaginal douches for several minutes, twice daily; two grains of quinine were taken four times daily. The diet consisted chiefly of milk with lime-water, and essence of beef, taken often in small quantities. By these means pain and general discomfort were alleviated.

August 13th. The pelvic pain had increased for past three days. The fullness and tenderness recorded a week previous had greatly increased; the uterus was quite fixed and more displaced. It seemed as if an abscess were forming.

August 16th. The tumefaction was greatest in the posterior cul-de-sac, giving pain about the anus and down the left leg.

August 18th. The pelvic trouble had increased to such a degree that it could be perceived externally. The patient suffered greatly from prostration, vomiting, and dysuria, with a constant desire to relieve the bowels. Pulse, 108. Considerable relief was obtained from the use of ten drops of the compound tincture of ipecac, every three hours.

August 19th. Tenderness continued, but with less pain.

August 20th. About the same. Pulse 92. Constant nausea with occasional vomiting. Tongue furred. Bowels open from fluid extract of senna. Patient wakeful, emaciated, exhausted. No haemorrhage for two days.

August 22d. Patient more comfortable than since illness. Still shooting pains in pelvis. Tumefaction diminished since yesterday. Patient took and retained some solid food for the first time, yesterday. No appearance of pus, at any time, from vagina or rectum.

August 24th. Still more diminution of pelvic swelling; less pain. Pulse 78. The patient feels encouraged.

September 13th. Tumefaction nearly disappeared, uterus nearly mobile. Catamenia present; no pain.

Dr. Sinclair said that the foregoing was a mere synopsis of the course, duration, and treatment of a somewhat severe case of peri-uterine inflammation. The details give a very imperfect notion of the amount of suffering through which the patient passed. Seized with pain on the 18th of July, it was a month before any change for the better was perceived. Three weeks after the attack the peri-uterine swelling seemed as if to form an abscess, but that no pus had formed was conclusive from its non-appearance in any of the discharges. The exciting cause of the trouble in this case was gonorrhœal poison communicated by the husband, who also confessed to having had a gonorrhœa at the time of his wife's first attack, soon after marriage. The time of infection could not be well defined, but pelvic trouble of this kind has been noticed to declare itself after the next menstrual period. According to Ber-nutz this was an affection corresponding to an orchitis in the male. This opinion is plausible and probable; but, laying the history of the case aside, it would be hard to distinguish a case of peri-uterine inflammation consequent on venereal poison from one arising from venereal excess.

Dr. Sinclair said he believed it to be scarcely worth while to make any remarks concerning differential diagnosis, unless it be a word or two about its relation to pelvic cellulitis. When attention was first, in modern times, directed to this class of pelvic troubles, to which pelvi-peritonitis belongs, it was supposed that the cellular tissue of the pelvis was the structure always involved, and that abscesses formed there only. It did not then enter the minds of any one that the cavity of the pelvis, inside the peritoneum, was more frequently the site of the disease than the cellular tissue outside the peritoneum. Ber-nutz especially deserves the thanks of the world for making this important truth known to science.

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#### PUBLIC PARKS.

THE city council of Boston has at last declared itself in favor of the establishment of public parks, by requesting the mayor to petition the legislature for authority to purchase lands for the purpose. The original order, which was introduced into the board of aldermen January 11th, asking for authority to purchase or otherwise take lands within the limits of the city, and for the assessment of betterments upon adjoining lands benefited by the establishment of a park, was stoutly contested in both branches of the government, and received important amendments. The measure finally obtained the support of seven

out of the twelve aldermen, and was passed in the popular branch by a vote of forty-four to fifteen.

Most of the amendments introduced into the order were of a restrictive character, and were intended to guard the city treasury against any hasty action or undue expenditure at the behest of any body of speculators. The legislature is asked to provide that no money shall be expended, either in the purchase or the improvement of parks, unless authorized by a vote of two thirds of the city council, and that the act asked for shall not take effect unless accepted by a majority of the voters present and voting at a special election. An amendment that no expenditure should be authorized or made for the purchase or improvement of any land, exceeding in amount the sum raised by taxation and appropriated by the city council for the purpose, and the money actually received for betterments assessed on adjoining lands,—a provision which would make the parks of very slow growth year by year,—though adopted by the board of aldermen was struck out by the common council.

A wise provision was also introduced looking to the appointment of park commissioners, by asking that all parks, and the purchase of land for the same, in Boston shall be in charge of three commissioners, not members of the city government, to be appointed by the mayor and confirmed by the city council and removable at any time by a vote of two thirds of the city council.

A still more important request was added to the order by the adoption of the provision authorizing any adjoining city or town that may desire to do so, to coöperate with the city of Boston by purchasing or taking lands within its own limits for similar purposes. By this means it is hoped that in the adoption of any plan, we shall not be limited to the narrow and irregular boundaries of the city of Boston, but that the wonderful advantages of the Charles River basin, and of the very accessible and beautiful spots of natural landscape which still remain in Brookline and perhaps in towns north of the city, can all be taken into consideration, and that, in the final laying out of the park of the future, that scheme will be adopted which will furnish us the very best park that Boston and its suburbs with their unsurpassed opportunities can offer.

The city now puts in an appearance at the State House in connection with the citizens, who have already petitioned and been heard. A satisfactory bill in accordance with the above provisions of the order of the city council has been prepared and presented, and there is good reason to believe that the legislature will speedily grant the request for authority to establish public parks.

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#### MASSACHUSETTS GENERAL HOSPITAL.

ATTENTION was called last year in this journal to the annual report of the trustees of the Massachusetts General Hospital, some of the recent improvements and additions being at that time alluded to. It will be remembered that the plan on which the new wards were constructed differed essentially from any hitherto adopted in this city. The reputation which Americans have won in the matter of hospital construction, arising from the valuable expe-

[April 15,

rience obtained during our late war, owes its origin largely to that trait of character which enables us to disentangle ourselves without great difficulty from traditions of the past in order to keep pace with the march of modern improvements. The buildings to which we now allude are interesting examples of this radical change from the old system. Two of these, built on the pavilion, or one-story plan, have been occupied during the past year, and have been found most useful additions to the hospital; although not perfect in all respects, the general plan on which the ventilation has been arranged worked satisfactorily, and the Warren ward, a fine illustration of the pavilion order, was pronounced by the late Dr. Derby to be the best-ventilated hospital ward he ever saw.

The success of these additions to the hospital has encouraged the trustees to attempt a third pavilion, which will embody such improvements as the experience with the two previous ones has suggested. This is to be called the Bigelow pavilion, in recognition of the hospital services of Dr. Jacob Bigelow during a term of twenty-eight years. A new building containing an autopsy-room and pathological cabinet has also been completed, and is now in use. As this is probably without exaggeration the finest of its kind in the world, we shall reserve a detailed description of it for a future number.

The trustees have doubtless felt authorized in making this outlay in view of numerous munificent bequests of which this charity has of late been the recipient. Among these we notice one, the Lincoln fund, which amounts to two hundred thousand dollars. It will be seen that the hospital, now well advanced in its second half-century of existence, still retains all its youth and vigor as a useful charity; its age is made manifest rather by the increased strength of its hold upon the affections of our charitable and beneficent fellow-citizens.



#### MEDICAL NOTES.

— At the annual meeting of the Boston Society for Medical Observation, held April 5th, 1875, the following officers were elected: —

Secretary, Dr. Edward Wigglesworth, Jr.; treasurer, Dr. Francis H. Brown; librarian, Dr. Alfred L. Haskins; pamphlet librarian, Dr. Charles P. Putnam; committee on admissions, Drs. William L. Richardson, J. Collins Warren, Henry H. A. Beach.

— The new Hôtel Dieu, now in process of erection, is described in the *Union Médicale*. As is very well known, during the three years which have followed the war the work has been suspended. The year 1874 was entirely given up to the execution of various changes in the plans recommended by the municipal council. These changes consisted especially in lowering the roofs, whose excessive height cut off the air and sunlight from the courts and promenades intended for convalescents, and in the removal of one story from the two wings which front on the quay Napoleon. Now all the changes introduced into the original plans have been made, and the work has been begun again with renewed activity and vigor. The building is composed of

six wings, three towards the east and three towards the west. Each wing has three stories, which are connected with the main building in the centre, which has also three stories. The two wings which face the Seine upon the quay Napoleon have but two stories of eleven windows on each façade. They are not intended for patients, but will be occupied by the different services of the Faculty of Medicine. The work is not in progress on this side. On the side of the grand façade the work is far advanced. The stairways are nearly completed. Carpenters, lock-smiths, and all the other workmen are busily engaged, and if some new administrative difficulties do not arise there is reason to hope that the inauguration of this new structure, certainly one of the most beautiful in Paris, will take place in the not distant future.

— An instance of poisoning by conium recently occurred in Brooklyn under peculiar circumstances. The proprietor of an electrical-bath establishment, who had been affected during two years with a nervous disorder, for which he had been treated by Brown-Séquard, took fifty minims of Squibb's fluid extract of conium, repeating the dose twice in an hour. Meantime he dictated to his wife notes of the physiological effects of the drug as he observed them in his own person. An hour after the last dose was taken, the wife noticed the development of alarming symptoms, and death speedily supervened. The fatal result became the subject of a coroner's investigation.

— Not long since, *L'Union Médicale* directed the attention of its readers to the statement of Dr. Simmons as to the happy results, in cases of obstinate vomiting, of the administration by the rectum of chloral hydrate. Dr. Simmons recommended to begin with a dose of thirty *grains* morning and evening. By mistake, it was printed in *L'Union Médicale* thirty *grammes* — an enormous difference. A subscriber not long after came to grief by administering *per rectum* half the quantity, fifteen grammes, to a hysterical patient for whose frightful paroxysms he had prescribed almost everything ineffectually.

A few minutes after the administration of the chloral the patient became completely collapsed, and remained in a state of unconsciousness, with constant tendency to syncope, for several hours. She was restored to consciousness with great difficulty by the persistent efforts of her physician.

Naturally, the subscriber calls the attention of *L'Union Médicale* to its error. That journal replies that for a long time the *grain* has not been employed in French prescriptions, and by a misprint *gramme* was substituted for *grain*. It thinks the excessive dose thus recommended should have made readers cautious as to its exhibition.

— At a meeting of the Society of Physicians in Vienna, reported in the *Wiener Medizinische Presse*, Dr. Schulz described a new form of disease which hitherto he had observed only in ballet-girls, and which manifested itself in a cramp of the muscles of the calf of the leg. It occurred chiefly amongst those who were in the habit of performing a *pas seul* on the points of the toes. The disease appeared to be similar in its character to writers' palsy. The muscle which is the chief agent in supporting the body upon the points of the toes is the flexor longus pollicis. This position, which is accompanied by a rigidity of the whole limb, can only be maintained when the foot is supported by a shoe made for this particular purpose. This muscular cramp was relieved in all

cases by faradization. Professor Patruban, in reply to this communication, stated that in his opinion it was "anatomically, physiologically, physically, and artistically" impossible that a dancer should stand upon the points of the toes; but that the sesamoid bone was the point of support. In proof of this view he referred to Hyrtl's lectures, and to the fact that Dr. Schulz had never had an opportunity to see the naked foot in this position.

— It is stated by the *Lancet* that Garibaldi, who has in his time played many important parts, is now going to head a Roman army of sanitary reformers, and see what can be done for the material interests of Rome by bringing a bill into Parliament for improving the Campagna and embanking the Tiber. We hope he may be as successful in his new undertaking against bad drainage, dirt, and malaria, as he was in some of his achievements towards the accomplishment of the great object of his life — Italian unity.

— Among the recent additions to the periodical medical literature of this country we notice two quarterly journals of an unusually high order of excellence. The *Archives of Dermatology*, published in New York, and the *Chicago Journal for Mental and Nervous Diseases* are both highly creditable to their editors. The care taken in the selection of material and the good taste displayed by the publishers are evidences of an appreciation of the increased demand among us for a high standard of excellence in our medical literature.

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## SURGICAL OPERATIONS AT THE BOSTON CITY HOSPITAL.

[*SERVICE OF DR. CHEEVER AND INGALLS.*]

THE operations performed during the week ending Friday, April 2, 1875, were as follows: —

1. Caries of humerus and tibia.
2. Haemorrhoids (ligature).
3. Removal of toe-nails.
4. Internal urethrotomy.
5. Stricture of urethra (dilatation).
6. Amputation of toe.
7. Amputation of fingers.

1. *Caries of Humerus and Tibia.* — A plump, healthy-looking lad, twelve years of age, had a "fever" about fourteen months ago. This was soon followed by severe pain and swelling in the left leg. At the end of two months this swelling broke and discharged pus freely. Six months after the "fever," he first noticed pain and swelling over the upper part of the left humerus. He had never received any injury. At the time of the operation the swelling in both the leg and the arm was moderate. The discharge was not profuse. There were three sinuses over the upper part of the tibia, and two of them led down to the bone. Dr. Cheever enlarged these and found an opening extending through the anterior wall of the head of the tibia into the cancellous structure. The sinus in the bone was enlarged with gouges, and all of the softened and diseased material scooped out. On the anterior surface of the left arm, three or four inches below the shoulder-joint, were two sinuses leading upwards and inwards towards the head of the humerus. The sinuses were slit up, and an opening, the size of a lead-pencil, found in the bone, just below the greater tuberosity of the humerus.

This opening, extending into the medullary canal, was enlarged, and the carious bone removed. Both bone cavities were lightly filled with small bits of sponge in a piece of compress, retained by a bandage.

3. *Removal of Toe-Nails.* — The patient was a man forty-five years of age. The nail on each great toe was thickened, rough, ridgy, and scaly ; of a dirty yellow color, and so loose as to be easily removed. The patient was anxious to get rid of them, as the pain and tenderness were a great annoyance. Dr. Cheever removed the nails along with a good strip of the skin and flesh over the matrix. The matrix itself was then thoroughly removed with a rose-drill, in the hopes of preventing the future growth of the nails.

The disease was supposed to be of a parasitic nature — the *onychia parasitica* of Tilbury Fox.

GEO. W. GAY, M. D.

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#### ADHERENCE OF PREPUCE AND GLAND IN INFANTS.

MESSRS. EDITORS,—I cannot deny myself the pleasure of translating the following article from the *Archives Générales de Médecine*, because it confirms completely the observations of my friend and respected master, Dr. J. B. S. Jackson. His conclusions in regard to the subject of this article were made many years ago, and surprised many anatomists and surgeons, who could scarcely credit the statements until their own repeated examinations demonstrated the truth of them.

Several years ago, while sitting beside Mr. Haward at the Ormond Street Hospital for Children, in London, a number of young children (four or five) were presented for operation for phimosis. Before the operations were commenced I stated to Mr. Haward the observations of Dr. Jackson, and said that I believed that adherences of the prepuce to the gland would be found to exist in these children. Mr. Haward had not heard of the fact, and was much interested to demonstrate there and then its truth. To the best of my recollection the adhesions were found to exist in nearly if not all of them. The article in the *Archives Générales* is as follows :—

"It was in January, 1860, that there appeared for the first time, published in the Hungarian language, the results of the researches of Jean Bókai on the affection which he designated under the name of cellular adherences between the prepuce and gland in young children.

"M. Bókai attributes the adherence of the prepuce to purely physiological causes. It is only under very exceptional circumstances that it may be of pathological origin. It is due to the intimate and continual contact which in the fetus exists between the most superficial epithelium-cells which line the prepuce and cover the gland. In this situation the cells need a long time to take on their normal consistence. To this influence is added that of the liquids which constantly moisten the epithelium of those mucous surfaces, and thus favor adhesion. These conditions are maintained for some time after birth, and to a more or less later period according to the case. They diminish in importance as the child advances in age.

"The author has carefully observed one hundred children, thirty of them being from five hours old to six months. Of this number twenty-two presented adherence in its highest degree. Of twenty infants from seven months to a year old, nine had extensive adherences. Fifteen from one to two years old furnished five well-marked cases of adherence. Of sixteen children whose ages varied from two years to three years, only three presented the condition described. Between the ages of four and seven years, in eleven children only one case of extensive adherence was found. Finally, in eight between nine and thirteen years old, no case of adherence was found. With all the other children, objects of this research, there existed a feeble degree of adherence.

"The author divides the cases which he has observed into three classes. In the first degree (or class) the adherence, which commences at the crown (or edge) of the gland, extends backwards, most often with preservation of the normal width of the prepuce. In the second class the adherence commences at the centre of the gland and extends to the posterior parts; the prepuce has its normal length and width. In the third class, the adherence, which starts from the apex of the gland, passes to the furrow which is behind the crown. In the latter case the newly born children frequently present an obliteration of the meatus of the urethra. In each of these classes there is pain when the prepuce is drawn beyond the line which these adherences limit. If these are torn away, the surface thus uncovered is of a bright red color, and when the union is intimate there is a little blood effused. The furrow behind the gland is filled with caseous matter, which is with difficulty removed.

"The author attributes the accumulation of this caseous matter to the repeated pullings of the prepuce, to the superficial ruptures these produce, to the blood which is the consequence of them, and to the consecutive inflammation of the foreskin. Finally, the difficulty of micturition ought to awaken the attention of the surgeon to the possible existence of these adhesions. In regard to treatment, and notably that by surgical intervention, M. Bókai, observing that the disorder has a certain tendency to correct itself according as the infant advances in age, objects to all operation by cutting instruments whenever the affection is not due to a purely pathological cause, when there is not retention of urine, or when a balanitis is present. The adhesions are easily destroyed by retracting the prepuce with one hand, whilst a blunt dissector held in the other one, separates them. The author has never had occasion to employ a cutting instrument. In cases where a partial spontaneous separation of adhesions in one part, with those in another still preserved, had given rise to cul-de-sac cavities, he has succeeded in destroying the union by means of water forcibly injected into the preputial cavity. The adherences once destroyed, the caseous matter is taken away, the surfaces heretofore confounded are cleansed, and the prepuce is brought back to its normal position, being first covered with oil. If the rupture of the adhesions has caused haemorrhage, this is stopped by compresses wet in cold water."

One is tempted in this connection to pursue this subject in reference to the adhesion of the labia in female infants, and to the efficacy of the dissector or probe in destroying them.

W. C. B. FIFIELD.

## WEEKLY BULLETIN OF PREVALENT DISEASES.

THE following is a bulletin of the diseases prevalent in Massachusetts during the week ending April 10, 1875, compiled under the authority of the State Board of Health from the returns of physicians representing all sections of the State:—

In Berkshire: bronchitis, rheumatism, and pneumonia. A marked decline in prevalence of diphtheria has occurred. Small-pox has disappeared from Lee.

In the Connecticut Valley: influenza, bronchitis, and pneumonia. In Springfield and Chicopee diarrhoea is extensively prevalent. Typhoid fever is quite common.

In the Midland section: bronchitis, influenza, rheumatism, and pneumonia. A noteworthy subsidence of measles and scarlatina has taken place. One case of cerebro-spinal meningitis in Clinton is reported, the patient being a child living in a low and ill-drained locality.

In the Northeastern section: pneumonia, bronchitis, influenza, rheumatism, and scarlatina. The small-pox case in Reading has extended the contagion to only one other person. One case of cerebro-spinal meningitis in Lynn. Scarlatina is increasing in this section.

In the Metropolitan section: bronchitis, rheumatism, pneumonia, scarlatina, and measles. Scarlatina and pneumonia have increased in prevalence; all the other diseases are less rife.

In the Southeastern counties: pneumonia, rheumatism, bronchitis, and influenza. Fall River continues to report cases of small-pox.

In the State at large there has been a marked decline of sickness during the last week, all the diseases except pneumonia being reported as less prevalent. The prevailing type has been mild.

Measles and scarlatina are most prevalent in Boston and its vicinity.

F. W. DRAPER, M. D., Registrar.

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 COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING APRIL 3, 1875.
 

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	Estimated Population.	Total Mortality for the Week.	Annual Death-rate per 1000 during Week.
New York . . . . .	1,040,000	565	28
Philadelphia . . . . .	775,000	387	26
Brooklyn . . . . .	450,000	196	23
Boston . . . . .	350,000	150	22
Providence . . . . .	100,000	28	15
Worcester . . . . .	50,000	17	18
Lowell . . . . .	50,000	23	24
Cambridge . . . . .	44,000	25	30
Fall River . . . . .	34,200	20	30
Lawrence . . . . .	33,000	15	24
Springfield . . . . .	33,000	4	6
Lynn . . . . .	28,000	10	19
Salem . . . . .	26,000	11	22

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[April 15.]

**MILITARY APPOINTMENTS.** — Dr. John L. Hildreth, of Cambridge, appointed Surgeon of the Fourth Battalion of Infantry, M. V. M., *vice* Dodge discharged by reason of change of battalion commander.

Dr. William J. Clark, of Milford, appointed Surgeon of the Tenth Regiment of Infantry, M. V. M., *vice* Hildreth discharged by reason of change of regimental commander.

Dr. Frederick H. Thompson, of Fitchburg, reappointed Assistant Surgeon of the Tenth Regiment of Infantry, M. V. M.

The above named gentlemen passed a successful examination before the Board of Medical Officers, M. V. M., April 9, 1875.

EDWARD J. FORSTER,

Surgeon Fifth Regiment of Infantry, M. V. M., Recorder of Board.

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**BOSTON SOCIETY FOR MEDICAL OBSERVATION.** — The next regular meeting will be held on Monday evening, April 19th, at eight o'clock. Dr. Frederic W. Vogel will read a Report of a Case of Measles. Dr. Ellis will read a paper on Capillary Bronchitis in Adults; the Frequency of its Complication with Changes in the Air Vesicles, and its Relation to Catarrhal Pneumonia.

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**BOOKS AND PAMPHLETS RECEIVED.** — The History of the Philadelphia School of Anatomy, and its Relations to Medical Teaching. A Lecture delivered March 1, 1875, at its Dissolution. By W. W. Keen, M. D. 1875.

Elephantiasis of the Penis from Stricture of the Urethra ; Amputation. By Robert F. Weir, M. D.

Roosevelt Hospital, New York. Third Annual Report. 1875.

Charter, List of Officers, and By-Laws of the Cambridge Dispensary. 1875.

Report of the State of the New York Hospital and Bloomingdale Asylum for the Year 1874. New York. 1875.

Third Annual Report of the Dispensary for Skin Diseases. Boston. 1875.

Fifth Report of the New York Ophthalmic and Aural Institute. 1875.

Health : A Handbook for Households and Schools. By Edward Smith, M. D., F. R. S. New York : D. Appleton & Co. 1875. Pages 198.

A Practical Treatise on the Diseases of the Eye. By Haynes Walton, F. R. C. S. Third Edition. Philadelphia : Lindsay and Blakiston. 1875. (For sale by James Campbell.)

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**A CAUTION.** — Members of the medical profession are cautioned against an Englishman, known as Joseph Kerr, *alias* Herbert Kerr, *alias* Stanley, "son of Dean Stanley," who has already paid a visit to several physicians in Boston, and may call on others. He represents himself variously, as a recent practitioner in London, as an interne of St. Thomas's Hospital, and surgeon of a Cunard steamer ; as about to seek employment or engage in practice in America, etc. He claims to have letters from Sir William Gull and other members of the profession in England, and refers to a well-known English merchant in this city, and to an Episcopal clergyman. It is sufficient to say that his statements have no foundation in truth.